

NOTES ON *EUPLOEA BLOSSOMAE* SCHAUS, A LITTLE KNOWN
DANAID BUTTERFLY FROM THE PHILIPPINES
(LEPIDOPTERA: DANAIDAE)

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A.S. Corbet published a key for the separation of the Indo-Australian and African species of the genus *Euploea* Fabricius in 1943. He dealt with all the known *Euploea* species except two species in the key, and furnished a foundation for the classification of this taxonomically difficult genus. *Euploea blossomae* Schaus, 1929, is one of the two species which were not included in Corbet's key, due to the fact that its affinities could not be recognized from the original description.

Recently I had a chance to examine a single female from Luzon, Philippines, and also an unique pair from Palawan, Philippines, both belonging to this *Euploea* species.

The female of *Euploea blossomae* is described for the first time, this species is newly recorded from Palawan and the Palawan race is described as a new subspecies.

In compiling this paper I tender my warmest thanks to Messrs. Y. Honda and K. Unno for providing me with the specimens of this very rare species, which they captured in Palawan and Luzon respectively. I would like to express my heartfelt thanks to Lt. Col. J. N. Eliot, Somerset, for his kind information on this *Euploea* species. To Messrs. T. G. Howarth and R. I. Vane-Wright, British Museum (Natural History), I am indebted for their kind informations on the type specimen of *Euploea blossomae* and for their advices.

Euploea blossomae blossomae Schaus, 1929 (Figs. 1—2)

♀ (hitherto unknown in literature).

Wing contour: Both wings termen slightly crenulate. Forewing termen perceptibly concaved between veins 2—5, and dorsum straight. Hindwing almost evenly curved.

Neuration: Both wings generally with usual *Euploea* neuration. Forewing with an appreciable, vestigally recurrent vein in cell, and vein 11 bowed toward vein 12, almost in contact with, but not anastomosed with it.

Upperside: Ground colour deep bluish black with clearly defined marginal and submarginal series of pure white spots. Both wings glossed with brilliant blue. Forewing marginal series of white spots obsolete above vein 5, and submarginal series of spots in spaces 2—3 distinctly larger than those of the following subspecies, *escapardae*, while spots in spaces 4—8 smaller than those of *escapardae*. Hindwing spaces 7—8 with proximal half brown and with distal half greyish white. The rest of wing concolorous with forewing in ground colour. Marginal series of white spots well developed and rather quadrate in shape. Submarginal ones also well developed and largest in spaces 2—3.

Underside: Ground colour uniformly lustrous light chocolate brown with the same marginal and submarginal series of pure white spots with upperside. Forewing bluish white spots in spaces 2—3, and space 1b with clearly defined greyish white streak in anterior portion, and posterior portion whitened. Space 1a almost whitened. Hindwing additional bluish white spots present at base of spaces 3 and 5—6.

Forewing length 44 mm.

Specimen examined: 1 ♀, Luzon, summit of Mt. Sto. Tomas, alt. 2250 m, 22. IV. 1970 (K. Unno).

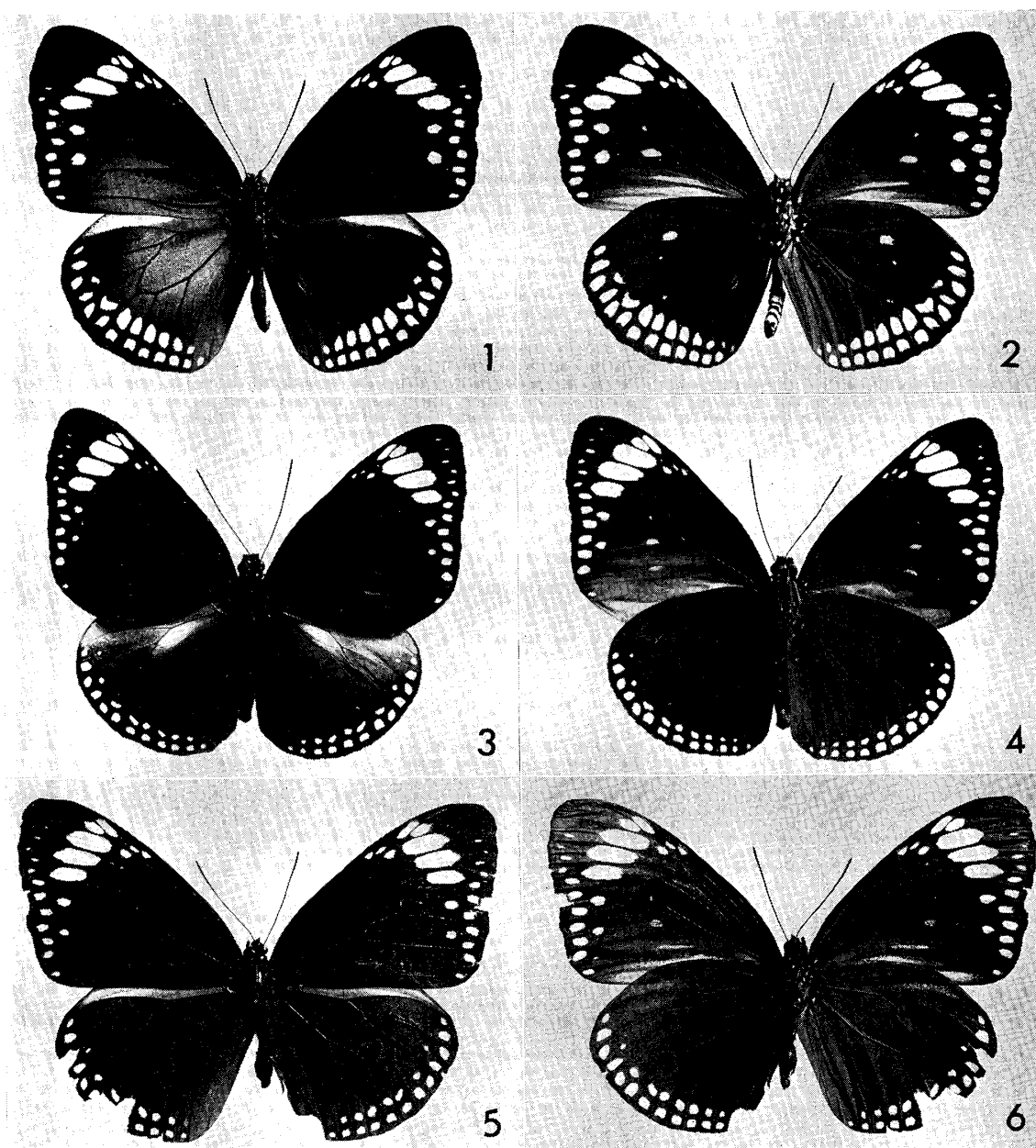
It is unusual in genus *Euploea* that the form in Luzon is almost identical with the form from Mindanao as in the case of *E. blossomae*, the type locality of which is Surigao, Northeast Mindanao.

Euploea blossomae escapardae ssp. nov. (Figs. 3—6)

Wing contour. ♂: Both wings similar to those of the nominate subspecies, in having the forewing termen concaved between veins 2—5 and the dorsum strongly bowed. Hindwing termen evenly curved. ♀: Forewing termen not perceptibly concaved and dorsum straight. Hindwing termen somewhat produced at vein 6.

Neuration. ♂♀: Identical with that of the nominate subspecies.

Upperside. ♂: Ground colour velvety black with marginal and submarginal series of pure white spots. Forewing with faint dark blue gloss visible in direct sun light or in oblique light. Marginal and submarginal series of pure white spots clearly defined. Marginal spots minute above vein 4, while submarginal ones becoming larger and conjoined above vein 4, forming a conspicuous subapical patch in spaces 4—8. Small subcostal spots present in spaces 6, 9 and 10. Two small but clearly defined blackish brown male sex brands noticeable in middle of spaces 1b, almost halfway from wing base to termen; upper one very thin, the length being about 1.5 mm, and the lower much larger, the breadth being 0.5 mm, and the length about 3.0 mm. Fringe black, chequered with pure white except apical and tornal portion. Hindwing spaces 7—8 nacreous, pale greyish except proximal portion. Proximal part of space 4, whole of spaces 5—6, except marginal part, and cell, buff brown, with differently shining specialized scales. Pale creamy brown, somewhat lenticular, raised patch conjoined to median vein present in anterior portion of cell. The rest of hinwing is velvety black of ground colour slightly



Figs. 1—6. *Euploea blossomae* Schaus; (2, 4, 6) underside: (1, 2) *E. b. blossomae* Schaus, ♀, Luzon; (3, 4) *E. b. escapardae* ssp. nov., Palawan, ♂; (5, 6) ditto, ♀.

tinged with brown towards dorsum. Marginal series of pure white spots sharply defined but rather small, and very close to termen. Submarginal ones much smaller than marginal spots and flat in shape. Fringe black, chequered with pure white below vein 7. ♀: Similar to male, but ground colour dark brownish black and without a velvety tint. Forewing subapical white patch in spaces 4—8, and subcostal spots in spaces 6, 9 and 10 slightly larger than those of male. Hindwing spaces 7—8 with proximal half brown and the distal half greyish white but no nacreous as in male. The rest of wing uniformly brownish black, without specialized scales.

Underside. ♂: Ground colour slightly lustrous rich chocolate brown, distinctly darker than that of ssp. *blossomae* with the same marginal and submarginal series of pure white spots with upperside. Forewing with additional small spots in spaces 1b, 2 and 3. Space 1b lighter brown, with slightly shining specialized scales, and in posterior portion ill-defined buff brown patch. Small but clearly defined oval brand present in same position with larger brand in upperside. Space 1a greyish white and nacreous. Hindwing uniformly rich chocolate brown and without spot except for marginal and submarginal series of white spots. ♀: Similar to male, but ground colour slightly paler, lacking specialized scales. Forewing space 1b concolorous with the rest of wing and with slender greyish white streak in anterior portion, and posterior edge whitened. Hindwing without spot except marginal and submarginal series of white spots as in male.

Forewing length 43 mm in ♂ and 49 mm in ♀.

Holotype: ♂, Palawan, Mt. Branjao, alt. 1030 m, 2. IX. 1971 (Y. Honda). Paratype: 1 ♀, same data with holotype. The type-series is preserved in the personal collection of Mr. Honda, Mino Osaka Prefecture.

The new subspecies differs from the other subspecies as follows: (1) Male with two small but clearly defined brands. (2) Male upperside hindwing with the wider area of specialized scales. (3) Marginal and submarginal series of white spots are smaller and placed close to termen. (4) Upperside forewing with faint dark blue gloss only visible in direct sunlight or in oblique light.

Corbet, in the preface of his key, presumed that *Euploea blossomae* might represent an additional group, but the species is obviously closely allied to *E. gamelia* Hübner from Java and should be placed in *gamelia* group. The two have the same wing contour and almost the same type of secondary sexual characters on hindwing above, i.e., with a pale creamy brown, somewhat lenticular raised patch in the anterior portion of the cell, and also with the extensive area of specialized scales above cell. The most important difference between them is that *gamelia* has a large, oval brand on forewing, whereas *blossomae* has two small brands (Palawan, verging on extinction?) or no brand (Philippine Proper, extinct?). The similar patterns of geographical variation of brands or androconia within the same species are seen in *Euploea core* Cramer and *Papilio paris* Linnaeus.

I have seen another male of *E. blossomae* recently captured in highland of South Mindanao, which is very different from the two subspecies dealt with in this paper. It will be dealt with in a forthcoming paper on the butterflies of Mindanao preserved in the Entomological Laboratory, Tokyo University of Agriculture.